2017 Census Test

Alexa Jones-Puthoff
Decennial Census Management Division

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

11

United States Census 2020

2017 Census Test
Overview

- April 1, 2017 Census Day
- A nationwide self-response test of 80,000 housing units

Purpose

- Test the integration of operations and systems for Self-Response
- Test the feasibility of collecting tribal enrollment information

National Sample: 80,000 housing units

• Housing units in mailable areas
• Remove housing units from recent decennial tests and the American Community Survey
• Stratified to oversample housing units in:
  • Alaska
  • Areas with relatively higher populations of American Indian and Alaska Natives
  • Areas with lower propensity to respond online

Reinterview: 15,000 housing units

• Conducted by phone
• Heavy oversample:
  • Alaska
  • People who identify as American Indian and Alaska Native
  • People who indicate they are enrolled in a tribe
  • People responding initially without a Census ID

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

12

United States Census 2020

2017 Census Test
Mail Strategy

Self-Response

- Self-response contact strategy: two-panel design, Internet First (invitation letter on first contact) and Internet Choice (questionnaire on first contact)
- Languages: English and bilingual (English/Spanish)
- 80,000 housing units in sample

Panel	Number	Percent
Internet First	48,900	61.1
Internet Choice	31,100	38.9

Language	Number	Percent
English	69,824	87.3
Bilingual (English/Spanish)	10,176	12.7

United States™ **Census** Bureau | U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States™ **Census 2020**

2017 Census Test
Mail Strategy (continued)

- First mailing on March 20, 2017

- All households mailed materials first and second mailing

- Mailing #3, #4, #5 sent to nonresponding households

- Mailing #4 included a questionnaire for households in both panels

Panel	Mailing 1 Letter or Letter + Questionnaire	Mailing 2 Letter	Mailing 3* Postcard	Mailing 4* Letter + Questionnaire	Mailing 5* "It's not too late" Postcard
Internet First	March 20, 2017 Letter	March 23, 2017	April 3, 2017	April 10, 2017	April 20, 2017
Internet Choice	March 20, 2017 Letter + Questionnaire	March 23, 2017	April 3, 2017	April 10, 2017	April 20, 2017

(*) Targeted only to nonrespondents

2017 Census Test
Operational Testing in 2017

Internet Self-Response
- First test using ECaSE platform
- Languages available: English and Spanish

Census Questionnaire Assistance
- First test to utilize Census Questionnaire Assistance contracted solution
- Interactive Voice Response system active
- Live agents taking responses by phone
- Languages supported: English, Spanish, Chinese (Mandarin, Cantonese), Vietnamese, Korean, Russian, and Arabic

Paper Data Capture
- Testing new paper control processes
- Testing new check-out procedure

United States™ Census 2020

2017 Census Test
Preliminary Self-Response as of April 19, 2017

Overall Self-Response

- 29.5 percent of the 80,000 households in sample have responded as of April 19, 2017

	Initial Panel	Final Panel	**Internet**	Internet Participation %	**Telephone**	Telephone Participation %	**Mail**	Mail Participation %
Internet First	48,900	41,699	14,817	35.5	1,192	2.9	0	0.0
Internet Choice	31,100	24,062	2,164	9.0	144	0.6	5,614	23.3
Total	**80,000**	**65,761**	**16,981**	**25.8**	**1,336**	**2.0**	**5,614**	**8.5**

*Individual components may not add to total due to rounding.

Telephone calls

- Total calls = 4,976
  - Calls referred to agents = 2,882 (57.9 percent)

United States™
Census 2020

2017 Census Test
Key Activities

Activity	Date
First Mailing	March 20, 2017
Conduct Internet Self-Response, Including Non-ID Processing	March 20 – May 12, 2017
Conduct Census Questionnaire Assistance (CQA)	March 20 – May 12, 2017
Conduct Paper Data Capture	March 20 – June 2, 2017
Census Day	April 1, 2017
Conduct Reinterview	April 10, 2017 – July 10, 2017
Last Mailing	April 20, 2017

United States™ Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

17

United States™ Census 2020

Questions?

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Administrative Records Research and Planning

2018 End-to-End Census Test: Nonresponse Followup

Maryann Chapin
Decennial Census Management Division

Andrew Keller
Decennial Statistical Studies Division

Nonresponse Followup

- Administrative Records Usage
- 2018 End-to-End Census Test – Overview
  - Goals
  - Operational Scope
  - Key Activities
  - Test Sites
- Nonresponse Followup Universe Creation
- Early Nonresponse Followup
- Enumerator Training
- Nonresponse Followup Field Data Collection Contact Strategy
- Multiunit Manager Visits
- Field Verification
- Proxy Enumeration
- Quality Control
- Operational Control System Enhancements
- Operational Closeout

United States™
Census
━━Bureau━━

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States™
**Census
2020**

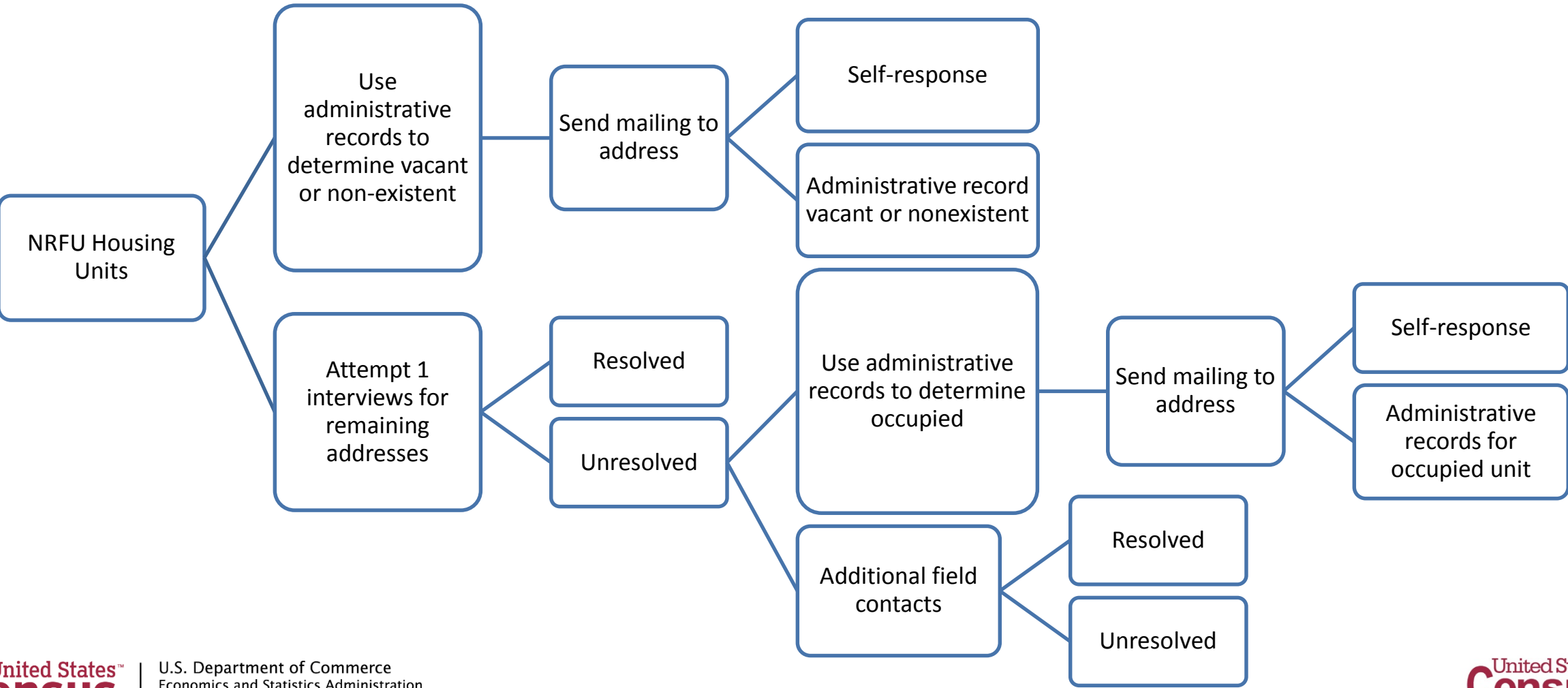# Administrative Records Research and Planning
Administrative Record Usage

Outline

- 2016 Nonresponse Followup (NRFU) contact strategy with administrative records (AR) determination
- Administrative Record Methodology for Occupied, Vacant and Nonexistent/Delete addresses
- Characteristics for administrative record enumeration
- Research findings
- Proposed 2018 End-to-End Census Test NRFU Contact Strategy

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

21

United States Census 2020

Administrative Records Research and Planning
2016 Contact Strategy

Administrative Records Research and Planning
Administrative Records Data Sources

Vacancy Determination

- United States Postal Service Information
  - USPS Undeliverable-as-Addressed (UAA) reasons for census mailings made around April 1
    - Vacant
    - No Such Number, No Such Street
    - Others
  - Delivery Sequence File

- Other Sources
  - Internal Revenue Service (IRS) 1040 filings
  - IRS 1099 information returns
  - Centers for Medicare and Medicaid Services Medicare Enrollment database
  - Indian Health Service Patient Database
  - Third-party Veterans Service Group of Illinois (VSGI) files

Administrative Records Research and Planning
Identifying Administrative Records Vacant Units

Housing Unit Status Model

- Data: 2010 Census NRFU addresses

- 2010 Census status
  - 1: Occupied
  - 2: Vacant
  - 3: Nonexistent/Delete

- Explanatory variables:
  - UAA flag and reason (e.g., vacant, no such number) on first and second mailing
  - Consistency of UAA reasons by ZIP code
  - Indicators for presence of persons in AR sources at address
    - Indicators for presence of these persons at other addresses
  - ACS area-level estimates: % renters, % poverty, % Black, etc.

United States
Census 2020

Administrative Records Research and Planning
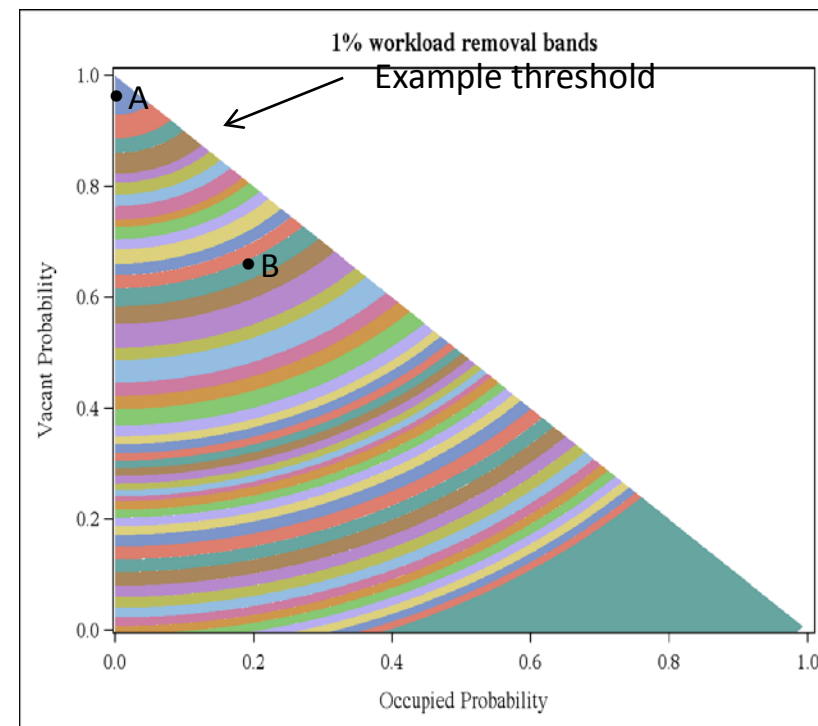## Identifying Administrative Records Vacant Units

Distance Function

The distance function can be visualized as successive bands of cases emanating from the point (0,1) in the top left corner

Each successive band represents an additional 1 percent of the NRFU workload

In this example, unit A is identified as AR Vacant while unit B is not

Similar approach implemented for Nonexistent or addresses that need to be deleted

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Can we reduce contacts for 101 Main Street?

1. Build a roster from administrative record sources

2. Check that multiple sources indicate the family lives at an address

3. Use statistical models to evaluate the roster

4. Decision for 101 Main Street

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Data Sources

Core sources for occupied rosters:

- Internal Revenue Service
  - 1040 Individual Tax Returns
  - 1099 Information Returns
- Centers for Medicare and Medicaid Services Medicare Enrollment database
- Indian Health Service Patient database

Additional sources:

- Social Security Administration Number Identification (Numident) File
- Best Race and Hispanic Origin file from Center for Administrative Records Research and Applications (CARRA)
- United States Postal Service (USPS)
  - USPS Undeliverable-as-Addressed (UAA) reasons for census mailings made around April 1
  - Delivery Sequence File (DSF)
- Veterans Service Group of Illinois (VSGI) Name and Address Resource and TrackerPlus files

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Data Sources Continued

Additional sources being researched:
- Department of Housing and Urban Development
    - Computerized Home Underwriting Management System (CHUMS)
    - Public and Indian Housing Information Center (PIC)
    - Tenant Rental Assistance Certification System (TRACS)
- Selective Service System registration
- USPS National Change of Address (NCOA)
- Supplemental Nutrition Assistance Program (SNAP) and other state program participation data
- CARRA's Kidlink file
- CoreLogic Tax and Deed information

Will continue to research sources, and will finalize in September 2018

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Evaluation

101 Main Street

- Juan Garcia   43 year old male   Hispanic
- Maria Garcia   40 year old female   Hispanic
- Jose Garcia   17 year old male   Hispanic
- Lucy Garcia   14 year old female   Hispanic

Research Questions:

- How likely is it that we are counting all of the Garcia family in the right place?
- How likely is it that the household composition of the Garcia family matches the Census?

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Person-Place Model

How likely is it that we are enumerating the Garcia family at the right place?

- Use 2010-vintage data
- 50 million NRFU addresses
- Use 2010-vintage administrative records for those addresses

- Dependent variable: 2010 Census status
  - 1: AR person-place pair is observed in 2010 Census
  - 0: AR person-place pair is not observed in 2010 Census
- Independent variables:
  - Properties of the address: AR count and composition, UAA, etc.
  - Indicators for presence of AR sources at address
  - Indicators for presence of AR sources at other addresses
  - ACS area-level estimates: % renters, % poverty, % Black, etc.

- Process - Based on 2010 relationship, we can assign probabilities to current vintage of AR data

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Person-Place Model

How likely is it that we are enumerating the Garcia family at the right place?

- Juan Garcia   0.80
- Maria Garcia   0.78
- Jose Garcia   0.75
- Lucy Garcia   0.70

- To evaluate the entire roster, we use the smallest probability of a person at the address.

- Lucy Garcia   0.70 value used for 101 Main Street

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Household Composition Model
How likely is it that the household composition of the Garcia family matches the Census?

- Household composition categories
- 0: Vacant/Delete (i.e., not occupied)
- 1: 1 adult, 0 children
- 2: 1 adult, 1+ children
- 3: 2 adults, 0 children
- 4: 2 adults, 1+ children
- 5: 3 adults, 0 children
- 6: 3 adults, 1+ children
- 7: Other

- Use 2010-vintage data
- 50 million NRFU addresses
- Use 2010-vintage administrative records for those addresses

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States Census 2020

Administrative Records Research and Planning
Identifying Administrative Records Occupied Units

Household Composition Model

How likely is it that the household composition of the Garcia family matches the Census?

- Independent variables
    - AR household composition
    - Properties of the address: AR count, UAA, etc.
    - Indicators for presence of AR sources at address
    - Indicators for presence of AR sources at other addresses
    - ACS area-level estimates: % renters, % poverty, % Black, etc.

- Given that we have 2 adults with 1+ children based on the Garcia family from administrative record, what is the probability that the Census would have enumerated 2 adults with 1+ children at the address?

- For our example, the Garcia family receives a .8 probability.

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Administrative Records Research and Planning
## Identifying Administrative Records Occupied Units

Distance Function

The distance function can be visualized as successive bands of cases emanating from the point (1,1) in the top right corner

Each successive band represents an additional 1 percent of the NRFU workload

In this example, the Garcia family is in our top 1 percentile of administrative record rosters.
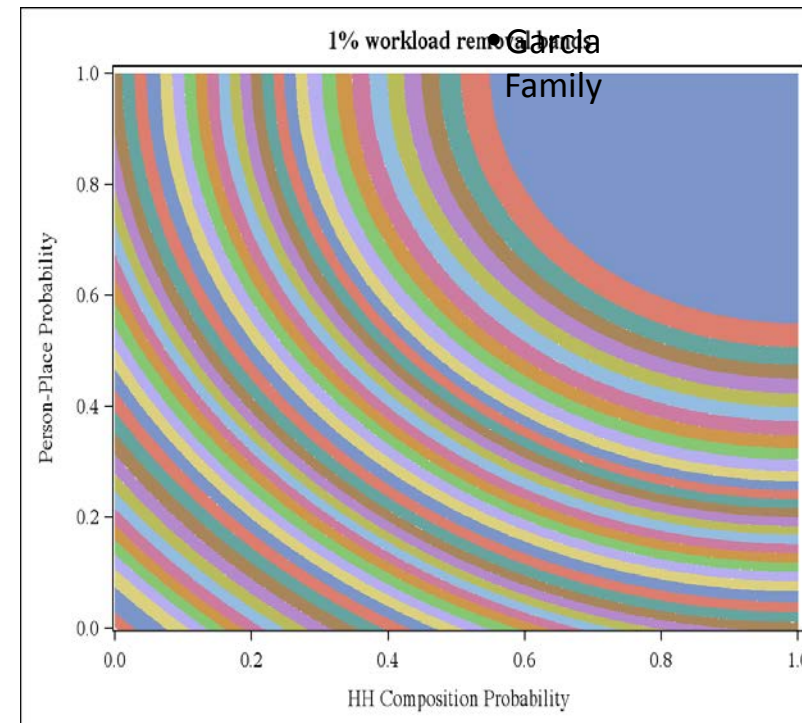
Administrative Records Research and Planning
Characteristics

Administrative Records Source Possibilities

Age and Sex
- Census Numident

Race and Hispanic Origin
- Prior Census, American Community Survey, or other Census Bureau responses
- Country of Origin (Census Numident)
- Census Bureau Best Race and Hispanic Origin file

Relationship to Householder
- Census Bureau KIDLINK file

Tenure
- Housing and Urban Development
- Tax and Deed Information

Detailed Vacancy
- Housing and Urban Development

Administrative Records Research and Planning
Results: 2016 Census Test Analysis

Administrative Records Research and Planning
2016 Census Test

Administrative record determination

- Occupied
- Vacant
- Delete

1-in-5 sample of administrative record cases received <u>full fieldwork</u>

- Compare our determinations to fieldwork results
- No address canvassing done before this test

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Administrative Records Research and Planning
2016 Census Test Results

1-in-5 Sample Evaluation Analysis

	Total	Occupied		Vacant		Delete		Unresolved	
	N	%	SE	%	SE	%	SE	%	SE
AR Vacant									
Total	715	21.1	1.3	42.8	1.6	20.7	1.2	15.4	1.2
LA County	236	19.9	2.3	43.2	2.9	22.5	2.3	14.4	2.1
Harris County	479	21.7	1.6	42.6	2.0	19.8	1.5	15.9	1.4
AR Delete									
Total	313	29.1	2.1	10.9	1.4	48.6	2.2	11.5	1.7
LA County	172	24.4	2.9	7.6	1.9	57.0	3.3	11.0	2.2
Harris County	141	34.8	3.2	14.9	2.1	38.3	2.7	12.1	2.5

Administrative Records Research and Planning
2016 Census Test Results

USPS UAA Reasons for AR Vacant and AR Delete Units Determined Fieldwork Occupied

UAA Reasons for AR Vacant/Fieldwork Occupied Units

Reasons	Number	Percent
Vacant in both	86	57.0%
Vacant in one	29	19.2%
Any other reason twice	25	16.6%
Any other reason once	11	7.3%
Total	151	100.0%

UAA Reasons for AR Delete/Fieldwork Occupied Units

Reasons	Number	Percent
No Such Number in both	26	28.6%
No Such Number in one	29	31.9%
Any other reason twice	27	30.8%
Any other reason once	9	9.9%
Total	91	100.0%

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

39

United States Census 2020

Administrative Records Research and Planning
Mailing for Administrative Record Cases

	AR Occupied (Phase 1)		AR Vacant		AR Delete	
	Count	%	Count	%	Count	%
Total	9,353		2,856		1,252	
AR Mailing Sent	8,418		2,848		1,252	
UAA on AR Mailing Sent	125	1.5	1,631	57.3	944	75.4

For 6 weeks after Census Day

AR Occupied were UAA 1.5 percent of the time.
   People could have moved out since Census Day.

AR Vacant were UAA 57.3 percent of the time.
   People could have moved in since Census Day.

AR Delete were only UAA 75.4 percent of the time.
   Seems less likely to change from not a housing unit to a housing unit.

Administrative Records Research and Planning
Results: 2010 Simulations Analysis

Administrative Records Research and Planning
Administrative Records Determination by Percent Hispanic Population in Block Group

ACS 5-Year Estimate of Percent of Block Group that is Hispanic	2010 NRFU Addresses (millions)	AR Determination (row percent)		
		AR Vacant (%)	AR Occupied (%)	Full Contacts (%)
0 to 10 percent	31.3	11.6	15.9	72.5
10 to 20 percent	6.8	9.4	15.7	74.9
20 to 30 percent	3.6	8.5	14.4	77.1
30 to 40 percent	2.2	7.6	13.3	79.1
40 to 50 percent	1.6	7.5	12.0	80.5
50+ percent	4.2	4.3	9.6	86.1
Total	49.8	10.1	15.0	74.9

Administrative Records Research and Planning
Administrative Records Determination by Percent Non-Hispanic Black Population in Block Group

ACS 5-Year Estimate of Percent of Block Group that is Non-Hispanic Black	2010 NRFU Addresses (millions)	AR Determination (row percent)		
		AR Vacant (%)	AR Occupied (%)	Full Contacts (%)
0 to 10 percent	33.6	10.5	16.0	73.5
10 to 20 percent	5.4	8.2	15.6	76.2
20 to 30 percent	2.9	8.1	14.1	77.8
30 to 40 percent	1.8	8.3	13.0	78.7
40 to 50 percent	1.2	8.9	11.9	79.2
50+ percent	4.9	12.1	9.6	78.3
Total	49.8	10.1	15.0	74.9

Administrative Records Research and Planning
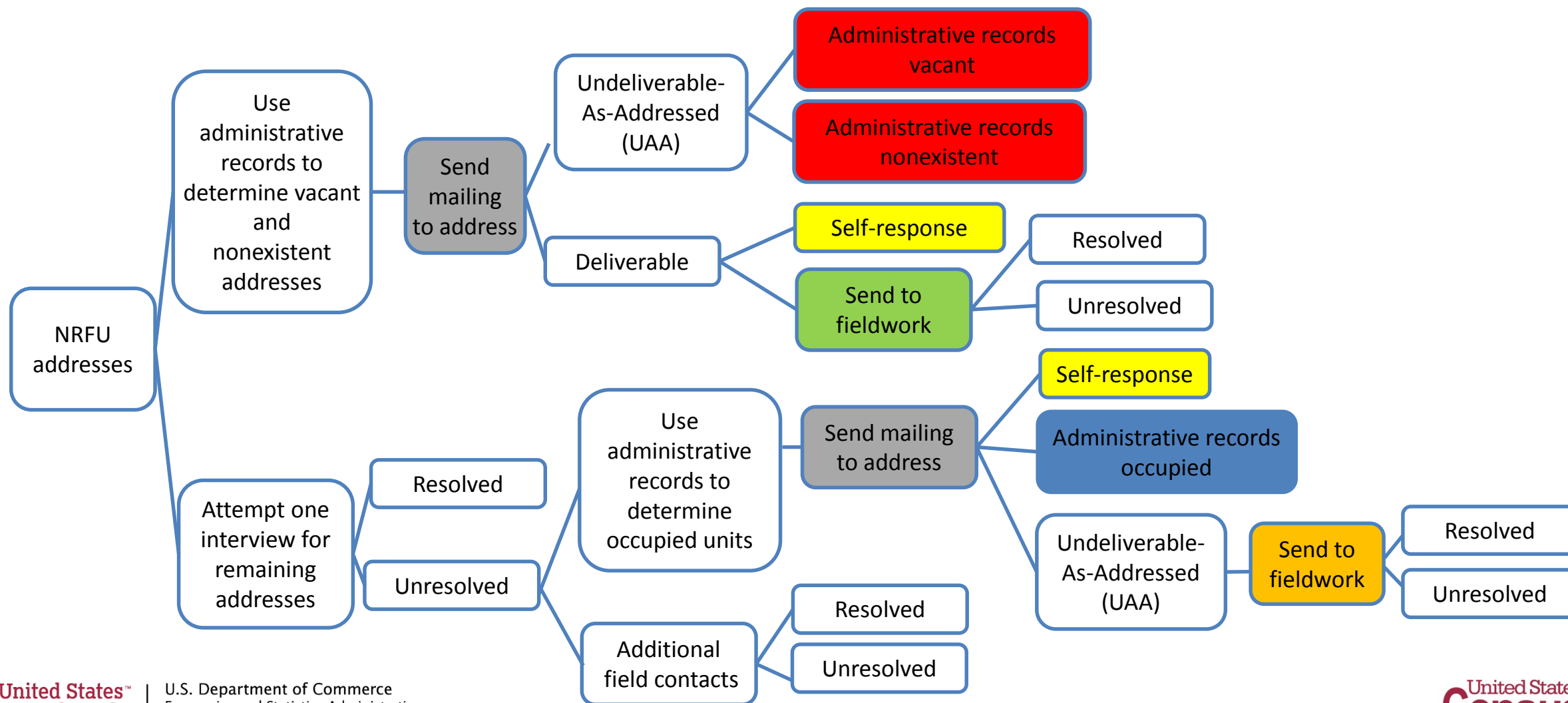
Changes to 2018 Contact Strategy

Administrative Records Research and Planning
2016 Contact Strategy
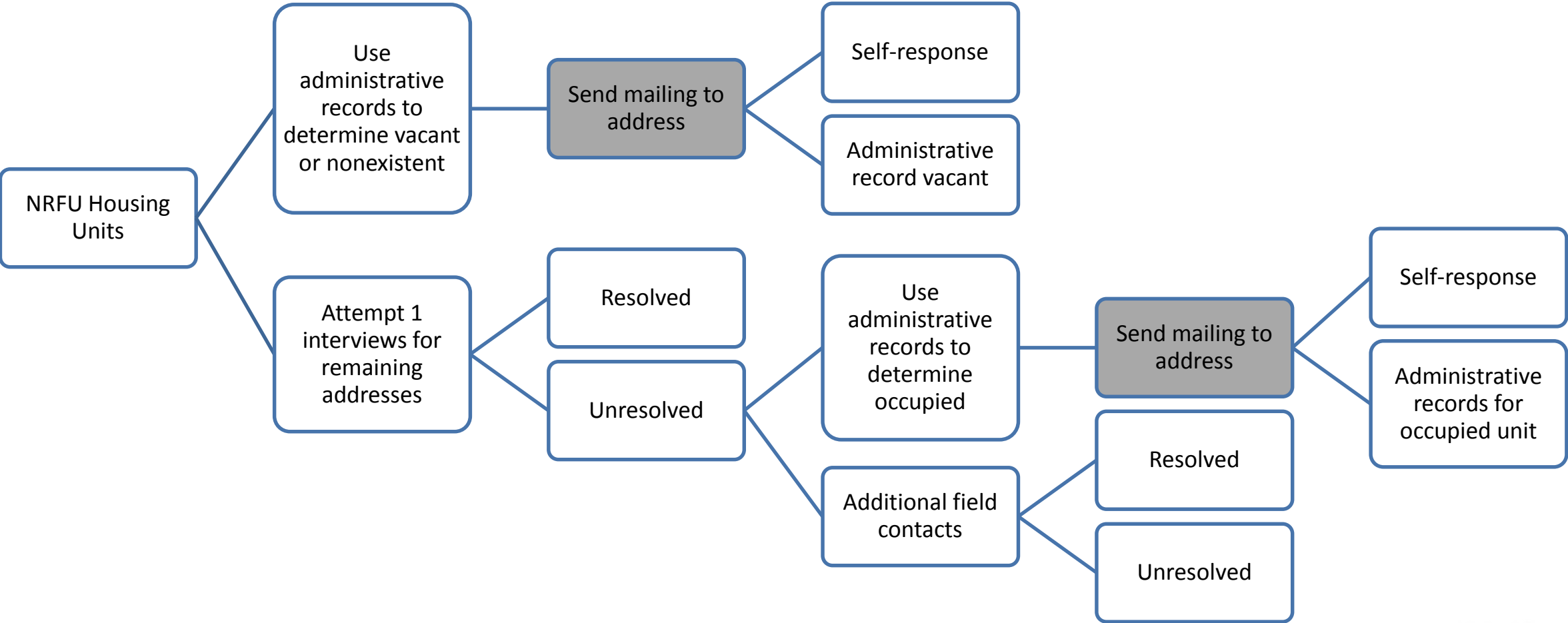
Administrative Records Research and Planning
2018 End-to-End Census Test Proposed Contact Strategy

2018 End-to-End Census Test: Nonresponse Followup

2018 End-to-End Census Test:
Overview

- April 1, 2018 Census Day
- Site test in Pierce County, Washington; Providence County, Rhode Island; and, Bluefield-Beckley-Oak Hill, West Virginia

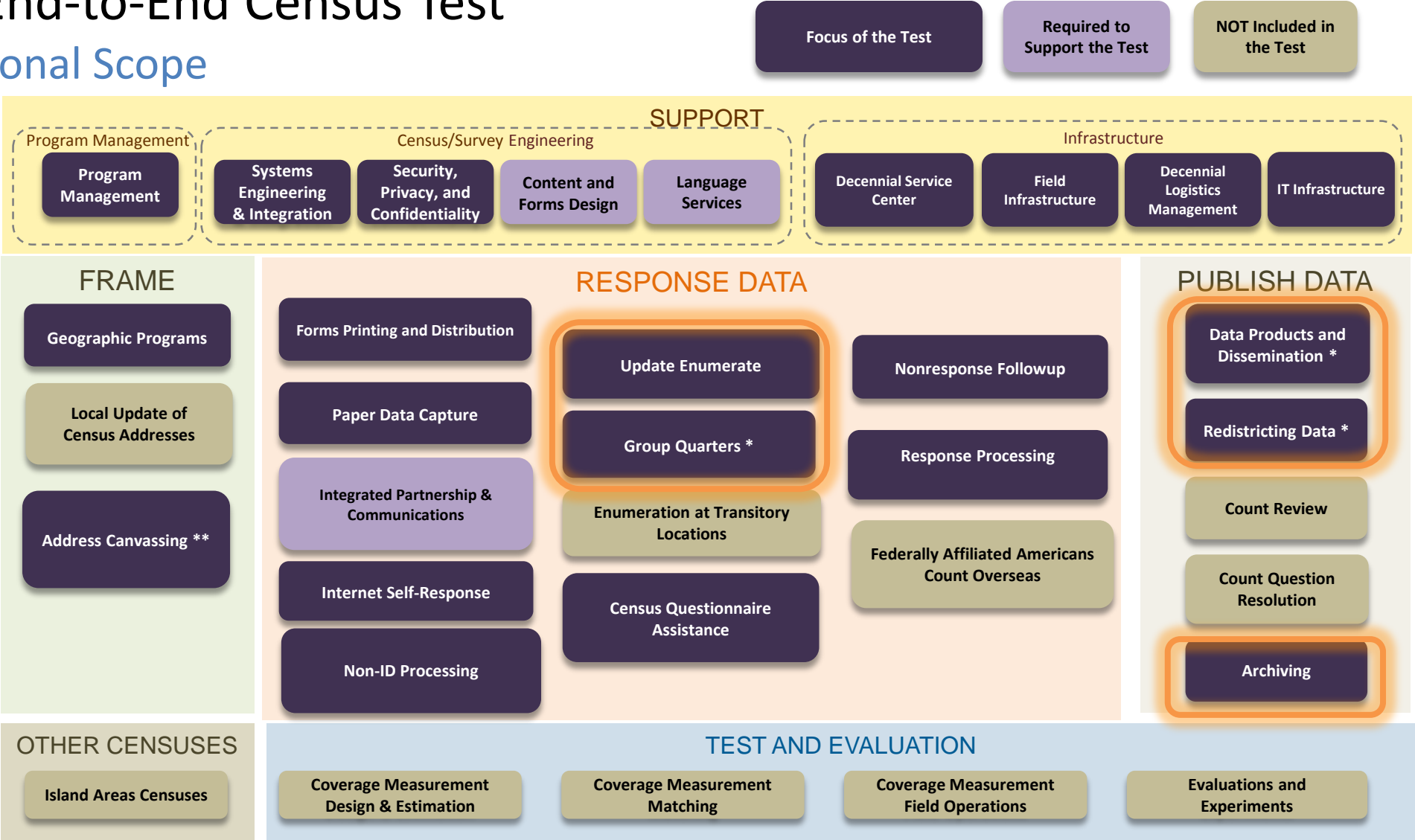## Goals:

- Validate that the operations in scope for the 2018 End-to-End Census Test are ready to go into production for the 2020 Census

- Test and validate major operational threads, procedures, systems, and infrastructure (IT and non-IT) together to ensure proper integration and conformance with functional and nonfunctional requirements

- Produce a prototype of geographic and data products

2018 End-to-End Census Test
Operational Scope

Focus of the Test	Required to Support the Test	NOT Included in the Test

SUPPORT

Program Management
- Program Management

Census/Survey Engineering
- Systems Engineering & Integration
- Security, Privacy, and Confidentiality
- Content and Forms Design
- Language Services

Infrastructure
- Decennial Service Center
- Field Infrastructure
- Decennial Logistics Management
- IT Infrastructure

FRAME
- Geographic Programs
- Local Update of Census Addresses
- Address Canvassing **

RESPONSE DATA
- Forms Printing and Distribution
- Paper Data Capture
- Integrated Partnership & Communications
- Internet Self-Response
- Non-ID Processing
- Update Enumerate
- Group Quarters *
- Enumeration at Transitory Locations
- Census Questionnaire Assistance
- Nonresponse Followup
- Response Processing
- Federally Affiliated Americans Count Overseas

PUBLISH DATA
- Data Products and Dissemination *
- Redistricting Data *
- Count Review
- Count Question Resolution
- Archiving

OTHER CENSUSES
- Island Areas Censuses

TEST AND EVALUATION
- Coverage Measurement Design & Estimation
- Coverage Measurement Matching
- Coverage Measurement Field Operations
- Evaluations and Experiments

(*) – Not in scope for test sites descoped from 2017 Census Test and 2017 Puerto Rico Census Test that may be added to the 2018 End-to-End Census Test.

(**) – For test sites descoped from 2017 Census Test and 2017 Puerto Rico Census Test that may be added to the 2018 End-to-End Census Test, only In-Office Address Canvassing is in scope.
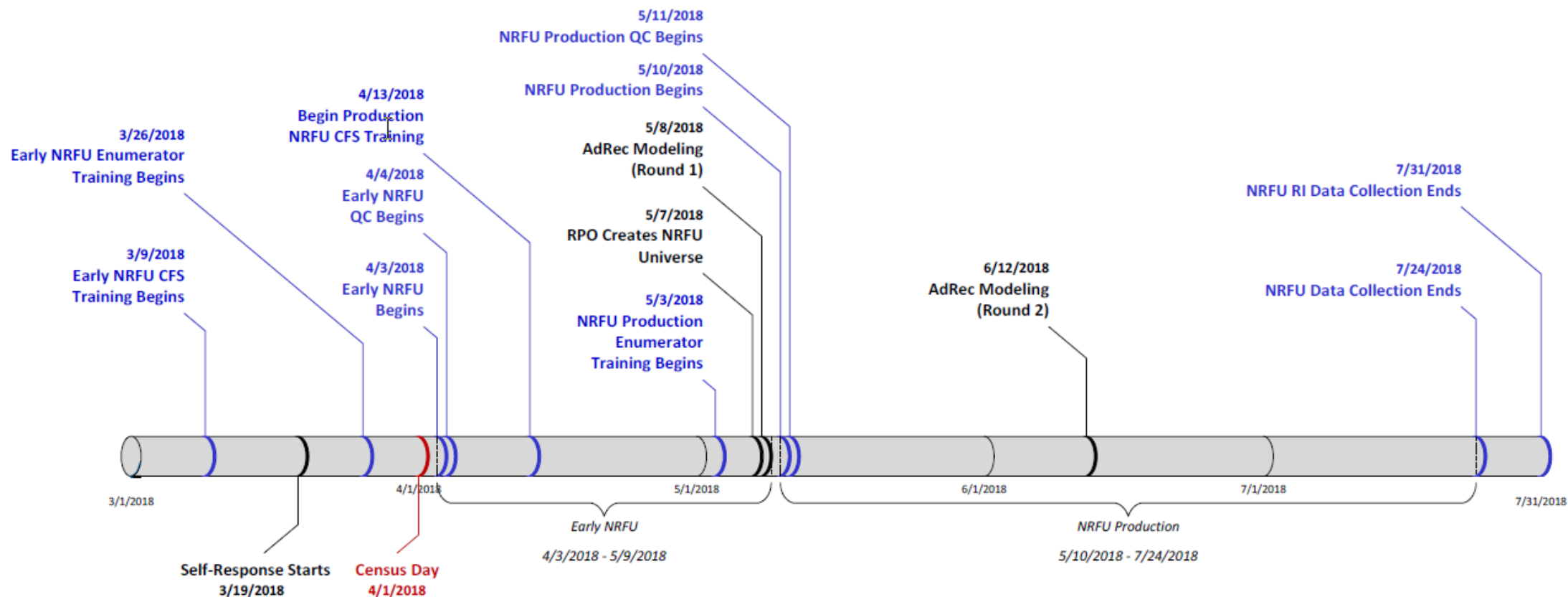
United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States Census 2020

2018 End-to-End Census Test
Key Activities

Activity	Date	
Conduct In-Office Address Canvassing	October 27, 2016 – February 2, 2017	✓
Open Regional Census Centers	January 3, 2017	✓
Begin Address Canvassing Field Staff Recruitment	March 10, 2017	✓
Open Area Census Offices	March 31, 2017*	
Conduct In-Field Address Canvassing	August 14 – September 29, 2017	
Conduct Group Quarters Advance Contact	January 5 – March 9, 2018	
Conduct Self-Response, Including Non-ID Processing	March 19 – July 31, 2018	
Conduct Group Quarters Enumeration	March 28 – June 12, 2018	
Census Day	April 1, 2018	
Conduct Early Nonresponse Followup	April 3 – May 9, 2018	
Conduct Nonresponse Followup Reinterview	April 4 – July 31, 2018	
Conduct Update Enumerate	April 16 – June 16, 2018	
Conduct Nonresponse Followup	May 10 – July 24, 2018	
Publish Prototype P.L. 94-171 Data and Geographic Products	April 1, 2019	

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov
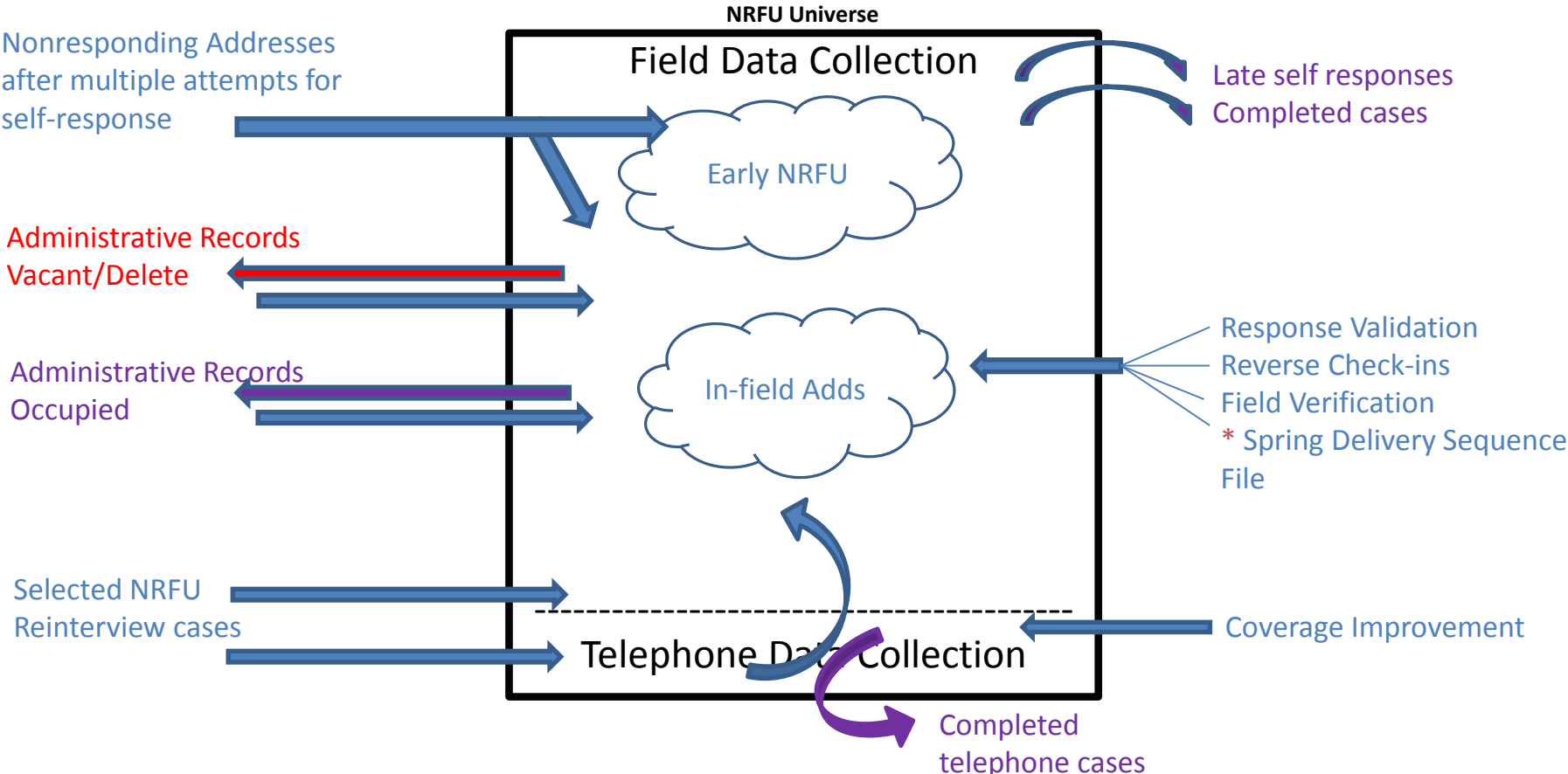
*Due to delays, Area Census Offices will open Spring of 2017

2018 End-to-End Census Test
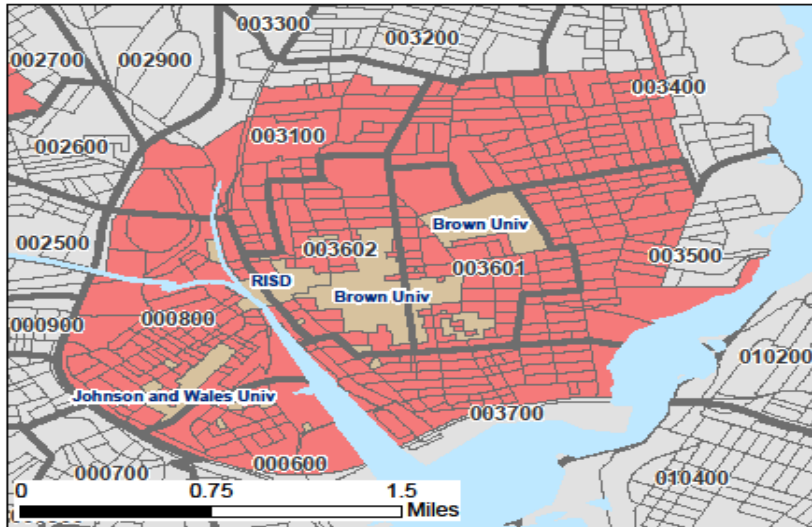## Nonresponse Followup – Field Data Collection Timeline

5/11/2018
NRFU Production QC Begins

5/10/2018
NRFU Production Begins

4/13/2018
Begin Production
NRFU CFS Training

3/26/2018
Early NRFU Enumerator
Training Begins

5/8/2018
AdRec Modeling
(Round 1)

4/4/2018
Early NRFU
QC Begins

7/31/2018
NRFU RI Data Collection Ends

5/7/2018
RPO Creates NRFU
Universe

3/9/2018
Early NRFU CFS
Training Begins

4/3/2018
Early NRFU
Begins

6/12/2018
AdRec Modeling
(Round 2)

7/24/2018
NRFU Data Collection Ends

5/3/2018
NRFU Production
Enumerator
Training Begins

3/1/2018   4/1/2018   5/1/2018   6/1/2018   7/1/2018   7/31/2018

Self-Response Starts
3/19/2018

Census Day
4/1/2018

Early NRFU
4/3/2018 - 5/9/2018

NRFU Production
5/10/2018 - 7/24/2018

UNITED States
Census
Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

51

United States
Census
2020

2018 End to End Census Test
Nonresponse Followup Universe

NRFU Universe

Field Data Collection

Nonresponding Addresses after multiple attempts for self-response →

Early NRFU

Late self responses
Completed cases

Administrative Records Vacant/Delete

Administrative Records Occupied

In-field Adds

Response Validation
Reverse Check-ins
Field Verification
* Spring Delivery Sequence File

Selected NRFU Reinterview cases →

Telephone Data Collection

Coverage Improvement

Completed telephone cases

* Addresses not previously in the enumeration universe.

2018 End-to-End Census Test

Early Nonresponse Followup
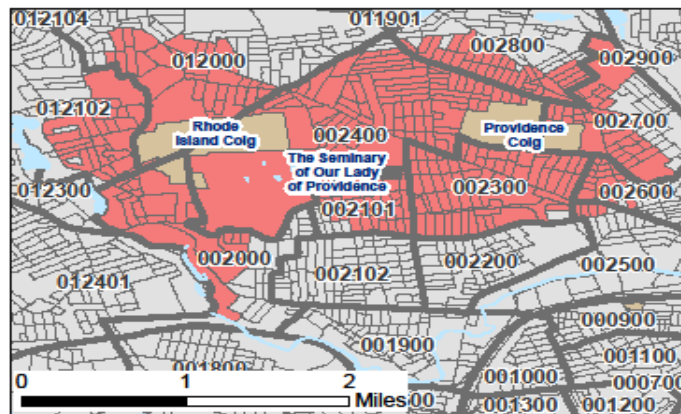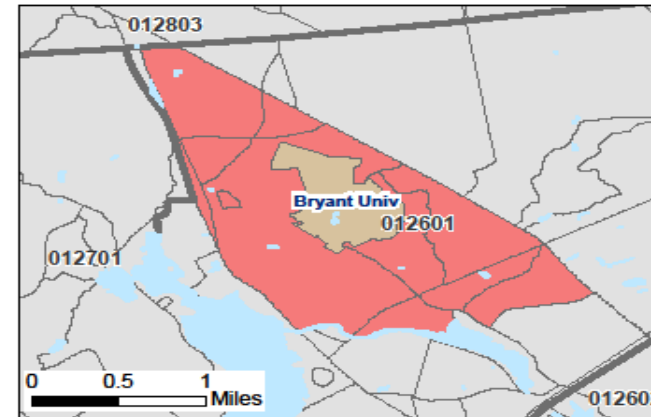
Providence, RI Early-NRFU

- Early-NRFU BCUs
- College or University
- Tract
- Water
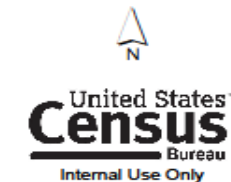
2018 End-to-End Census Test
Nonresponse Followup – Enumerator Training

- Moving from 2010, using a 100% cascaded, verbatim, and all-classroom style training, to a blended learning approach of online and classroom training

- Online training benefits include: self-paced training, a truly standardized delivery approach, use of an interactive training approach, and easier ability to incorporate edits into training

- Moving from 100% classroom based verbatim-style training to self-paced online and facilitated classroom instruction, augmented with hands-on practice using the devices (e.g. smartphones, laptops, tablets)

- Online training use of scenario-based videos, demonstrations, and simulations of how the device operates

- Automated knowledge and skills assessment vs a hand-scored and corrected paper test

- Use of electronic manuals and job aids to support field staff's on-the-job performance. Encourages use of the manual due to searchability of content

2018 End-to-End Census Test
Nonresponse Followup – Field Data Collection Contact Strategy

- Administrative Records modeling determines initial contact strategies
  - Vacant/Delete: Removed from nonresponse followup workload
  - Occupied: Receives one contact attempt
  - No Determination: Receives maximum of 6 contact attempts
- Nonresponding addresses become proxy eligible when:
  - Third contact attempt at census address is unsuccessful
  - Enumerator observes a unit is vacant or not a housing unit
  - Supervisor determines a case should be proxy eligible or proxy required
  - Maximum daily limit of three proxy attempts
- Contact strategies for multiunits
  - Interview building manager to remove vacant units from nonresponse followup workload
  - Same enumerator assigned manager interviews for all multiunits in a Basic Collection Unit
- Non-ID Field Verification cases receive one attempt
- Self-responding vacant cases receive one attempt
- Response Validation Re-collect cases receive maximum of three contact attempts

United States Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

55

United States Census 2020

2018 End-to-End Census Test
Nonresponse Followup – Multiunit Manager Visits

Purpose: Resolution of occupancy status for units at multiunit structures via an interview with a 'manager'

Process:
- Grouping of nonresponding addresses within a multiunit
- Enumerator attempts contact with 'manager'
- Addresses by 'manager' as vacant or nonexistent are designated as such and are not subject to additional contact attempts
- Addresses identified by manager as 'occupied' or left undetermined will be assigned for contact attempts by an enumerator to collect response data

2016 Census Test Findings:
- Manager visits successfully identified the occupancy status of nonresponding units, thus reducing enumerator attempts to resolve vacant units

2018 End-to-End Census Test:
- Increase in the number of units at a Basic Street Address that triggers a eligibility for a manager visit
- Maximum of two manager visit attempts before assigning nonresponding units for enumeration attempts

2018 End-to-End Census Test
Nonresponse Followup – Field Verification

Purpose: To verify the existence of addresses resulting from Non-ID self-responses that could be assigned to a Census Basic Collection Unit (BCU) or block and identified as new to the Master Address File

Process:

- Non ID self-response received
- Address completes Non ID processing including automated matching and/or clerical processing
- Identify "new" geocoded MAF addresses for field work – Field Verification (FV) workload
- FV cases added to the NRFU workload
- Enumerator attempts to locate the FV address and capture status
- No capture of response data
- No use of Notice of Visit correspondence

United States™ Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States™ Census 2020

2018 End-to-End Census Test

Nonresponse Followup – Proxy Enumeration

Proxy Enumeration: Occurs when attempts to contact a household member to determine/occupancy status and complete a census enumeration are unsuccessful and when a person with sufficient knowledge is identified to provide the census enumeration

Proxy Eligibility:
- Cases become proxy eligible on the third unsuccessful attempt
- In-moves become immediately proxy eligible
- Vacant by observation, nonresidential, address does not exist, etc., are immediately proxy eligible

2016 Census Test Findings:
- Challenges acquiring proxy responses
- Additional enumerator training to emphasize the importance of proxies and proxy procedures
- Contributing factor to the unresolved rate

2018 End-to-End Census Test:
- Enhanced training on proxy concepts
- Modifications to enumeration application to capture occupancy status and housing unit population (in the case of occupied units) early in the proxy interview

2018 End-to-End Census Test
Nonresponse Followup – Quality Control

- Quality is infused throughout the operation
  - Automated edits within the application
  - Operational Control System Alerts
- Quality Control Reinterview
  - All cases reviewed by SMaRCS for indications of falsification using Administrative Records and paradata
  - Suspicious cases sent for telephone reinterview (via CQA); then case is sent to the field if necessary
  - SMaRCS will select up to a 10 percent sample for reinterview
  - One staff conducts field data collection for both NRFU production and NRFU Reinterview

2018 End-to-End Census Test
Nonresponse Followup – Operational Control System Enhancements

Additional Operational Control System Alerts

Alert Name	Description
Proxy Attempts	When two or more cases were proxy eligible but the employee did not enter any proxy attempts into the enumeration application device.
Reopening Cases	When an employee opens two or more inactive cases but did not complete them.
Working Before Assigned Hours	When an employee attempts a case more than 30 minutes before their assigned start time.
Unconfirmed Delete	When an employee has two or more deletes that are not confirmed for UE FU and NRFU assignments.
High Field Resolution Rate	When an employee has a high field resolution rate.
Low Cases per Hour	An employee has worked a low number of cases/hour compared to peer (where peers are defined as other employees working in a similar geographic area).
High Cases per Hour	An employee has worked a high number of cases / hour compared to peers.

Enumerator Training

United States™ Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

United States™ Census 2020

Questions?